

Application No.: 10/754,518

### REMARKS

Solely in order to expedite prosecution and without prejudice/disclaimer to the subject matter embodied therein, independent claims 1 and 9 have been amended to incorporate additional features including that recited in claims 2 and 10, respectively (*see, e.g.*, original claims 2 and 10, and page 22, line 24 – page 23, line 1 of Applicants' specification for support). Accordingly, the rejections against claims 1 and 9 under § 102 have been rendered moot.

Claims 1 and 9, as amended, stand rejected solely under 35 U.S.C. § 103 as being unpatentable over Koma et al. '969 ("Koma"). This rejection is respectfully traversed for the following reasons.

**I. Proposed modification is legally improper**

The Examiner admits that Koma does not disclose the claimed curvatures of the alleged shoulder portions. The Examiner therefore effectively alleges that said feature would have been an obvious design expedient based on routine experimentation, relying on the *In re Aller* case. However, it is respectfully submitted that the holding in *In re Aller* has since been qualified, so that the Examiner's reliance on routine experimentation to allege obviousness of the claimed feature is in legal error and is therefore *per se* improper. The "routine experimentation" basis for an obviousness rejection can only be relied upon by the Examiner if the *prior art* first recognizes the modified parameter as a result-effective variable. In the instant case, only Applicants have recognized and considered the importance of the claimed curvatures as a result-effective variable, so that the Examiner can not rely on the obviousness-theory of "routine experimentation" as a basis for asserting obviousness thereof.

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The Examiner is directed to MPEP § 2144.05(II)(B) under the heading "Only Result-Effective Variables Can Be Optimized", which sets forth the applicable standard for determining result-effective variables *and applying the In re Aller case as done by the Examiner*:

A particular parameter must first *be recognized* as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. (citing *In re Antonie*, 195 USPQ 6 (CCPA 1977)).

In the instant case, the cited prior art is completely silent regarding the alleged shoulder portion curvatures as used in the particular combinational structure recited in claims 1 and 9, as achieving a recognized result (indeed, the Examiner does not reference any portion of the cited prior art for this purpose); so that there is no basis for alleging obviousness thereof based on routine experimentation. Accordingly, it is respectfully submitted that the claimed feature would not have been obvious in view of routine experimentation because the cited prior art does not recognize the claimed parameter, *in the particular combinational structure set forth in the claims 1 and 9*, as achieving a recognized result. Even to just attempt such a rejection (which would be rebuttable), the Examiner would have to show that Koma discloses that the curvatures of the alleged shoulder portions define certain characteristics so that modifying the curvatures to get an optimal *known* characteristic value may allegedly have been obvious. Here, the Examiner does not evidence any portion of Koma for this purpose so that the Examiner's allegation of obviousness is completely unsupported in fact and in law.

**II. Claimed Combination Has Criticality**

Nonetheless, even assuming *arguendo* that the Examiner's alleged "routine experimentation" basis for asserting obviousness is proper, it is respectfully submitted that the claimed *combination* can provide new/unexpected results thereby evidencing the criticality of the claimed parameters, so as to rebut any alleged obviousness based on routine experimentation.

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As set forth in MPEP § 2144.05(III), Applicants can rebut a *prima facie* case of obviousness based on routine experimentation by showing the criticality of the claimed range. "The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims. . . . In such a situation, the applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range." *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). Indeed, Applicant can rebut a presumption of obviousness based on a claimed invention that falls within a prior art range by showing "that there are new and unexpected results relative to the prior art." *Iron Grip Barbell Co., Inc. v. USA Sports, Inc.*, 392 F.3d 1317, 1322, 73 USPQ2d 1225, 1228 (Fed. Cir. 2004).

In the instant case, it is respectfully submitted that the claimed combination can provide new and unexpected results relative to the prior art which are significant. Specifically, as set forth in detail on page 19+ of Applicants' specification in which the claimed combination (*see, e.g.*, Figure 7 of Applicants' drawings) is compared to examples outside of the claimed range (*see, e.g.*, Figures 8-11 of Applicants' drawings), the claimed **combination** can provide the capability to improve the uniformity of the flatness of a polished film at the outer edge relative to other portions thereof. Only Applicants have recognized the need to improve such relative flatness, and conceived of the needed parameters to effect the capability of such improvement.

Based on all the foregoing, it is respectfully submitted that claims 1 and 9 are patentable over the cited prior art. Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claims 1

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and 9 are patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also patentable. In addition, it is respectfully submitted that the dependent claims are patentable based on their own merits by adding novel and non-obvious features to the combination. In this regard, it is respectfully requested that withdrawn dependent claims 5-8 be rejoined as being dependent on an allowable claim. Accordingly, it is respectfully requested that the rejections under 35 U.S.C. § 102/103 be withdrawn.

**CONCLUSION**

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP

  
Ramyar M. Farid

Registration No. 46,692

**Please recognize our Customer No. 20277  
as our correspondence address.**

600 13<sup>th</sup> Street, N.W.  
Washington, DC 20005-3096  
Phone: 202.756.8000 RMF:men  
Facsimile: 202.756.8087  
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